Example (Exercise 8.41) a) Find X2 such that P(X2>X2)=0.99 when - v=4 P(X2>Xa)= x by definition so we want X2-99 Por V=4 X 0.99 = 0.297 (row v=4) b)  $P(X^2 > X_{\alpha}^2) = 0.025$  when v = 19 $\chi^2_{0.025} = 32.852$  (row v=19) C) P(37.652<X<sup>2</sup><X<sup>2</sup>)=0.045 when V=25 This is X0.05 be 0.045 from row v=25 Table A.5 05005 This area needs to This limit. is Aren No.005 (Nº25 × 2.05 total area here 0.05

Example (Exercise 8-49) a) This greation is about the t-distribution n=24. Find k such that P(-2.069 < T < k) = 0.963From Table A.Y row v=24-1=23, notice that 2.069 = t0.025 Therefore -2.069 = - to.025 = to.975 weed this to be 0.025 1-(0-965+0-025) Aren = 0.01 Therefore -2-069 k= to.01 = 2.5 (V = 23)C(k) P(-k < T < k) = 0.9V=23 7 Area 0.5 0.05 > Area 0.05 k= to.05 = 1-714 (v = 23)